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A  
PRACTICAL TREATISE  
ON  
CHOLERA,  
AND ON  
MUCO-ENTERITIS;  
OR, THE  
DISEASE MISNAMED  
ASIATIC, MALIGNANT, OR EPIDEMIC  
CHOLERA,  
CAREFULLY ADAPTED FOR GENERAL PERUSAL.

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BY G. TINN,

SURGEON.

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NEWCASTLE UPON TYNE:  
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## PREFACE.

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THE necessity of a plain and brief description of the disease named Cholera, and the treatment requisite to its cure, is sufficiently obvious when it is considered that it is frequently so severe, that to prevent its fatal tendency proper remedies are required to be instantly administered. It is, therefore, of the utmost importance that the people, and especially those persons who cannot obtain immediate medical aid, should be enabled to distinguish the disease, and administer the remedies which are indispensably requisite to its cure ; and as the progress of the disease is, in many instances, so very rapid, that fatal injury is inflicted before medical aid, or the necessary remedies can be procured, the necessity of always having those remedies at that period of the year in which the disease occurs, cannot be too strongly impressed upon the minds of the people.

It is, also, of great importance that the disease which has been named, or misnamed, Asiatic, Malignant, or Epidemic Cholera, should be distinguished from the disease which has ever been known by the appellation of Cholera, as the remedies which are indispensably necessary to the cure of the latter are extremely injurious and destructive in the former. As these diseases would seldom, if ever, be fatal, either in this or any other country, if promptly and judiciously treated, it is hoped that the observations contained in the succeeding pages will be the means of alleviating the suffering, and lessening the fatality occasioned by these maladies.

A very faint, light-colored watermark or background image of a classical building with multiple columns and architectural details is visible across the entire page.

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## PRELIMINARY OBSERVATIONS.

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IT is very generally believed that a new disease originated in Asia, and has been traversing, for the last twenty years, various parts of India and of Europe. No opinion, however, can be more erroneous. But previous to entering into any discussion with respect to this singular question, it perhaps may not be entirely uninteresting or unnecessary to take a brief view of the subject of Cholera. The name Cholera is derived from two Greek words, which literally signify bile and to flow, and has been in use since the time of Hippocrates, who distinguished two diseases by this appellation—the one by the name of Dry Cholera. They were thus denominated, it appears, from the supposition that they were produced by an increased secretion of bile, and which is the direct meaning of the term. Modern writers admit of several varieties of Cholera, namely, the Bilious, the Dry or Flatulent, the Spasmodic, and the Asiatic, Malignant, or Epidemic; great diversity of opinion, however, exists amongst medical writers with respect to these varieties. It may here be proper to observe that there can be no species or varieties of a disease; and that the supposed varieties of Cholera must be either one and the same disease, differing only in severity, or distinct diseases; and in either case the term species or varieties, as applied to a disease, is inaccurate and absurd.

The *Dry* or *Flatulent Cholera* has been discontinued as a species of Cholera by the majority of modern writers, who consider it as Colic; it, however, has lately been again distinguished as a variety of the former disease by Drs. Good and Copeland, who have named it Flatulent Cholera. The reason assigned by the former writer for considering it as a variety of Cholera is, that “as the distinguished symptoms of anxiety and spasm which peculiarly draw the line of distinction between Cholera and Colic are equally present in this and in the other species, we cannot disjoin them without confusion.” These symptoms (if one of them must be regarded as a symptom) attend only the severe forms of Cholera, and are sometimes present in Colic and in other diseases; they cannot, therefore, draw the line of distinction between Cholera and Colic, and this disease cannot on this ground be considered as a variety of Cholera. A singular opinion is entertained by Dr. Copeland with respect to this disease: “It generally holds,” he says, “an intermediate rank between Colic and Cholera; sometimes approaching more nearly to the former.” It is difficult to conceive how a disease can hold any such rank. Dr. Copeland, however, cannot consistently regard it as Cholera. The description of Dry Cholera

by Sydenham is both curious and laconic. The only symptom he enumerates is flatulence, and "it is," he says, "without vomiting or looseness." It is differently described by Drs. Good and Copeland, who define it thus—"Vomiting and purging rare, sometimes occasional retchings, gripings and spasms of the abdominal muscles, with great and oppressive flatulency, temporarily relieved by eructations and dejections of flatus." According to these authors, Flatulent Cholera consists sometimes of the following symptoms:—1, Gripings and spasms of the abdominal muscles; 2, Great and oppressive flatulency; 3, With or without occasional retchings; and at other times there are, in addition to these symptoms, vomiting and purging. The former case is the disease denominated Colic, and the only danger to be apprehended is inflammation of the bowels supervening; to prevent which, by removing the cause of irritation, purgative medicines are requisite. The latter case is the irritation of the intestines, which arises from acrid and indigestible food.\* The purging removes the causes of irritation, and the disorder in general soon spontaneously subsides; but if the griping pain and purging be severe, a little brandy should be taken, or twenty or thirty drops of laudanum in a little water, and repeated in two or three hours if necessary. Sydenham in his description of Cholera alludes to the latter disorder, which, he says, "is occasioned by a surfeit, comes at any time, the symptoms are indeed alike, and the cure the same, yet 'tis of another kind." The similarity of the symptoms of this disease and Cholera exists only in the mild form of the latter disease: congestion of the lungs never supervenes in the former disease, consequently it is never attended with the symptoms which distinguish the intense form of Cholera.

The *Spasmodic Cholera* is peculiar, it is said, to intertropical climates, particularly the Eastern hemisphere, and is considered to be a new disease. The term was first used in 1807 by Mr. Curtis, who proposed to attach it to a disease which was prevalent in India, and which he regarded at that time as a new disease. The descriptions of this disease are extremely various and contradictory; and it is evident that Bilious Cholera, and several other diseases, are described as Spasmodic Cholera, and that there is no distinct disease of this appellation. Its leading symptom and that which caused it to be regarded as a new disease, and to be designated Spasmodic Cholera, is said to be spasm, but this symptom is far from being regarded by many writers as either characteristic or essential to this disease. Mr. Orton asserts that "in a large proportion there is no appearance of spasm." And again, "In the second and very fatal visitation I am informed that vomiting, and purging, and spasm, were very frequently in a great measure, if not entirely, absent;" and Dr. Good observes that "several instances were heard of at Hoobly and other places of natives being attacked with the disease whilst in the open air, and who, having fallen down, retched a little, complained of vertigo, deafness, and blindness, and expired in a few minutes." He states also, that "Mr Gordon gives a history of

\* Irritable Diarrhoea would probably be a proper name for this disorder.

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many cases of this kind." It is even said, that "at Ballamy, a tailor was attacked with what was supposed to be *Cholera*, and instantly expired with the work in his hands, and in the very attitude of sitting." Spasm evidently is not a leading symptom in these cases, and vomiting and purging are, it appears, equally unnecessary to constitute this disease. "In many," says Mr. Orton, "there is no purging; in some no vomiting; and in others neither of these symptoms." It matters not, it seems, whether there is spasm or no spasm, vomiting or no vomiting, purging or no purging, the case is still Spasmodic Cholera, or a new disease. The absence of the characteristic symptoms in these cases is attributed by Dr. Good to a very incomprehensible circumstance. "The disease," he says, "destroys before it has assumed its regular character."\* That these cases were not Bilious Cholera is unquestionable; but as diseases have ever occurred in which there is "no appearance of spasm," that attack natives in the open air, and which are instantly fatal, by what means are they to be distinguished from them, and ascertained to be Spasmodic Cholera or a new disease? Dr. Copeland, in attempting to distinguish the Bilious from the Spasmodic Cholera, says, that "as additional phenomena are developed in the latter variety, and other symptoms assume a different or modified character, and *especially* as a distinct mode of cure is requisite, the propriety of considering it as a separate disease is manifest." He, however, has not explained these phenomena, or described these symptoms; and it is impossible, from his description of these diseases, to distinguish the one disease from the other. He states, also, that "there can be no doubt that the first and third (Bilious and Spasmodic) varieties chiefly differ in degree, and in the circumstances of the latter arising from the operation of causes of a more intense grade than those which induce the former." He states, also, that "several of the cases of Cholera which Sydenham has described as epidemic in 1669, seem to have been of the variety (Spasmodic) now under consideration." As every disease is more severe in some instances than in others, and arises from causes of greater or less intensity, it is obvious that, if these circumstances produced distinct varieties of a disease, there would be no end to species or varieties of diseases. No cases of Cholera that occurred at the period referred to are described by Sydenham. He only observes that the disease (*Cholera*) was more epidemical in that year than he ever knew it in any other. The disease which was epidemic in 1676 was attended, in some instances, it appears, with more violent and extensive spasm than Sydenham ever before observed. He says, "At the end of summer the Cholera Morbus raged epidemically, and being heightened by the unusual heat of the season, the symptoms of convulsions that accompanied it were more

\* The above singular remark reminds me of the following anecdote, which was related to me a few years ago. A medical practitioner, elated with the thought of having treated successfully a case of Asiatic, Malignant, or Epidemic Cholera, related it to a medical friend, who, perceiving that it was not Cholera, observed that it had none of the characteristic symptoms of that disease, "Oh, no," replied the other, "but it might have had."

violent and continued longer than ever I observed before ; for they did not only seize the belly, as they were wont, but now all the muscles of the body, and the arms and legs were especially seized with dreadful convulsions, so that the sick would sometimes leap out of the bed, endeavouring by stretching the body every way to suppress the violence of them." No disease in India, or in any other country, could be attended with more extensive and severe spasm than that which is described by Sydenham, and if the severity of any particular symptom could justify the opinion that it was thereby made a new and distinct disease, then the epidemic that occurred in this country in 1676 may justly be regarded as a new and distinct disease ; but as this is too absurd a proposition to be for a moment entertained, it is evident that Mr Curtis had no reason to regard the disease which was prevalent in India as a new disease, or to propose from its leading symptom to call it Spasmodic Cholera.

It is unnecessary, it is presumed, to adduce any further evidence to prove that the Bilious Cholera, and diseases of other denominations, have been described as Spasmodic Cholera, and that there exists no distinct disease of this appellation.

The *Asiatic, Malignant, or Epidemic Cholera*, is also considered to be a new disease, and originated, it is said, at Jessore, in India, in 1817, and appeared in Europe after traversing for fourteen years various parts of Asia. The evidence adduced to prove the origin and existence of this disease is, that "the inhabitants of Jessore, astonished and terrified at the unaccountable and very destructive inroads of the pestilence, fled in crowds to the mountains, as the only means of escaping impending death ;" and that "if Cholera identical with the present did previously exist in Hindostan, it did not spread as in the present instance ;" and that "distinguished by its intense malignity from all other varieties then present or previously known was that form of Indian Cholera which commenced its ravages in Jessore in the month of August, 1817." Dr. Jamieson, who was secretary to the Bengal Medical Board, says, with respect to the origin of this disease, that "what gave validity to the conjecture was the opinion then entertained, and since industriously propagated, that the fumes or specific poison producing the disease had its rise not in any vitiated state of the atmosphere or other causes of a general nature, but in circumstances of a purely local nature, such as the use of rancid fish or blighted grain. It is, nevertheless, certain that nothing could be more erroneous than the notion of the origin of the epidemic, for, not to speak of its frequent occurrence as early as May in some parts of the Middea and other districts, it is quite clear, from the statements of the medical staff, written separately and without interchange of knowledge or communication, that more than a month previously to Jessore becoming afflicted, the disease had begun to prevail epidemically in the distant provinces of Behai and Dacca." It is not unusual for the natives of India to quit their habitations during the prevalence of Cholera (Bilious Cholera), and remove to the elevated and consequently more salubrious parts of the country, and it is very judicious of them to remove during the prevalence of this disease from such a crowded town as Jessore is represented to be, where

the heat of the atmosphere must be greatly increased, into an elevated, cooler, and more healthy situation. That Cholera has sometimes previously been nearly, if not quite, as prevalent and malignant in India, is evident from the testimony of Dr. Copeland, who states that "Cholera has occasionally assumed an epidemic form, nearly approaching the remarkably fatal pestilential Cholera which appeared in Bengal in 1817." In no country is Cholera (Bilious Cholera) more frequent than in India; and it is unnecessary to adduce any evidence to prove that it is annually epidemic in Europe; but as neither the terror of the inhabitants, the occurrence, spreading, or *malignity* of a disease can be admitted as any proof of the origin or existence of a new disease, it is unnecessary to enter into any further discussion with respect to them. It is only by an accurate description of the disease that the truth or fallacy of the opinion can be ascertained; and if correctness of description is a necessary consequence of a multiplicity of writers, no disease should be more accurately described, or more clearly distinguished from others, than the Asiatic, Malignant, or Epidemic Cholera; but so intent have the various writers been in tracing an Epidemic in straight lines and curves, and in discussing the manner of its transmission, that they seem to have entirely overlooked the necessity of distinguishing it from other epidemics and diseases. The evils which, it is said, accompanied *it* have been delineated with all the eloquence of which language is capable, and its horrors have been portrayed in every imaginable shape; its progress has been traced with geographical exactness; and its celerity and want of speed ascertained with mathematical accuracy; but its peculiar or characteristic symptoms have altogether escaped their observation, or have been considered as of very minor importance. So minutely have all these circumstances been described, that it might reasonably be supposed that the inhabitants of Asia and of Europe had never previously been afflicted with any epidemical or fatal disease—and as a proof of the exaggeration that has been resorted to with respect to the cause of the epidemic that was prevalent in Jessore, it is only necessary to state that the tanks and ponds of the Gangetic Delta, and the swampy surface of the Sunderbunds, are represented as having been converted into "*apparent spiricles of poison.*" It is chiefly by such unfounded, unjustifiable, and ridiculous assertions that the doctrine of contagion (a doctrine that has inflicted considerable mischief upon mankind) is propagated and sustained. Divest this doctrine of the "*apparent spiricles of poison*" that are supposed to lie dormant, or concealed in bales of merchandise and in dirty rags, and scarcely a particle of evidence remains—and that which remains is not more rational than the evidence on which was founded the belief of our ancestors in witches and in witchcraft. Every epidemical disease, even the Plague itself, that bug-bear to Europeans, appears and disappears without the aid and in defiance of sanitary measures, and without regard to spiricles of poison. It is a disgrace to the present, or to any age, to attribute the production of diseases to causes of an entirely imaginary nature, or to excite alarm in the minds of the people by the absurd supposition of epidemical diseases being

communicable from one individual to another, and thus prevent not only the necessary attention being paid to those afflicted with any of these diseases, but the adoption of those means which would have a tendency to prevent the disease. The Typhus Fever, Small Pox, Measles, Hooping Cough, and Scarlet Fever, are epidemic diseases, and it is a very general opinion that they are also communicable from one person to another, by absorption, and through the medium of the atmosphere. There is, however, no proof that any of these diseases are communicated through the medium of the atmosphere or by usual and common contact. The Small Pox is both epidemic and communicable by inoculation, but the latter circumstance is no proof that it is communicated in the manner attributed to epidemical and supposed contagious diseases. The Cow Pox is communicated by vaccination, but no person believes that it can be conveyed from one person to another in any other way. The structure of some parts of the human constitution it appears undergoes some alteration by the peculiar diseases Small Pox, Measles, Hooping Cough, and Scarlet Fever; and a change having been effected, it is not again liable to have these diseases. The alteration of the constitution produced by Small Pox seems to be effected by the Cow Pox, and thus the former frequently dreadful malady is prevented. It is well known to the members of the profession that a change in the membranous parts of the human constitution is frequently occasioned by other diseases, especially those of an inflammatory nature, and the diseases above named chiefly affect the membranous structures, and are diseases of an inflammatory character. These diseases are epidemic in certain seasons of the year, and depend upon a particular state of the atmosphere, and are consequently much more prevalent in some years than in others; and many children are not afflicted with some of these diseases until a much later period of life than others, although exposed to the same atmospherical influence, and this circumstance can only arise, it is presumed, from some peculiarity in the health of those children. It is not probable, if any of these diseases were communicated by morbid matter floating in the atmosphere, or by usual and common contact, that children exposed to its influence would escape with impunity. Typhus Fever arises from a want of a sufficient quantity of pure atmosphere, and is epidemical in chill, damp, thick, and calm weather; and afflicts those persons whose constitutions are in a debilitated state, and especially those who live in low, damp, confined, or ill-ventilated habitations. The Plague, in all probability, arises from the same cause as that which produces Typhus Fever. A singular instance of gratuitous assertion with respect to Small Pox and the propagation of Fevers has lately been exhibited by the author on "Contagious Cholera."\* He says "the majority of severe contagious diseases have been imported from the East. The Small Pox was known for generations in China before it made its way to the West in the middle of the sixteenth century. For its origin in the first instance Small Pox was most probably indebted to the crowded population of China, and the coincidence of

\* Mr Kennedy.

*famine.*" And again, "A malady prevalent in a village may be *decidedly* non-contagious, while that in a town, the disease being the same, may *assume* the most virulent and contagious form." It cannot be a matter of surprise that the person who believes that Small Pox most probably originated from a crowded population and famine, should assert that "a fever may be decidedly non-contagious in a village," but "most virulent and contagious in a town." That epidemic and many other diseases should oftener assume the intense form in a town than in a village, is only what might naturally be expected, from the nature and causes of these diseases; and, indeed, so frequently is this the case in Typhus Fever, that it is indispensably necessary, in many instances, to remove those afflicted with this disease in a town into an open, elevated, and healthy situation. No considerable time has elapsed since some members of the profession (I believe in Edinburgh) adopted the precaution of feeling the pulse of those afflicted with this disease through the medium of a cabbage leaf; and really if the disease ever assumed the virulent and contagious form imagined by the author of "*Contagious Cholera,*" there was at least some necessity for the singular and ingenious precaution to which they resorted. It is also stated by Mr. Kennedy, in attempting to prove that Cholera, which was prevalent in the grand army in India, did not cease in consequence of a change of locality and of temperature, that "the history of the disease shews that on the contrary that it had run through its course of infection before the grand army quitted the Scinde." It is impossible to conceive how a disease with which a person may be repeatedly afflicted can "run through its course of infection;" or that it should suddenly cease at the time when it has assumed its most "virulent and contagious form," if it were really contagious.

The descriptions of the Epidemic Cholera which was prevalent in India are extremely various and conflicting. They, at first, it appears, strictly coincided with those of Biliois Cholera, but, it is said, that "no long time elapsed when peculiar and most characteristic features pressed themselves into notice. The *presence* of bile in the vomited and dejected matters in the old European Cholera having *ever been especially remarkable*, it was now found that, on the contrary, in the Indian Disease, that fluid was *invariably absent*; and that the rejected matters were composed of a peculiar whitish substance, resembling coagulated albumen. It was even found that *vomiting and purging* were phenomena of very minor importance, and by no means peculiar to the India Cholera, as they were in *multitudes of cases* altogether absent. The strictly essential symptoms were recognized to appertain to inexpressible derangement of the nervous and respiratory systems; and it was only when *natural strength of constitution*, or some other *inexplicable cause interfered*, that vomiting, purging, and spasm *intervened as the secondary and insignificant sequelæ of the real disorder.*" It is an erroneous opinion that the presence of bile in the vomited and rejected matters have "ever been especially remarkable in the old European Cholera." Few writers have parti-

cularly described the appearance of the dejections, but those who have do not state that the appearance of bile is especially remarkable in them. Celsus, who has minutely described them, says: "The bile bursts forth both upwards and downwards, at first *like water*, afterwards as if fresh meat had been washed in it; sometimes *white*, sometimes *black*, or variegated." It would be no easy task to perceive bile in such dejections as these, and it is obvious that the absence of bile could not be "the peculiar and most characteristic feature in the multitude of cases," in which vomiting and purging were altogether absent. The latter cases were certainly not Bilious Cholera; but we are not informed how they were distinguished from those diseases in which the strictly essential symptoms are found to appertain to inexpressible derangement of the nervous and respiratory systems, and in which "*natural strength* of constitution, or some other inexplicable cause" never interferes, and in which "vomiting, purging, and spasm" never supervene as the "*secondary and insignificant*" sequelæ. It is impossible on any other principle of reasoning to reconcile the conflicting descriptions of the disease, than by inferring that distinct diseases have been identified as one and the same disease, and described by one and the same appellation.

The medical board of Bengal published a very minute and prolix description of the Epidemic Cholera of India, and it affords indubitable proof that the disease which was prevalent in India was the disease named Bilious Cholera: there is not a symptom (and the board appears to have left none undescribed) that is not present in the intense form of that disease. It is, indeed, plainly stated by Dr. Ranken, who prepared the official report in conformity with a general requisition of the Bengal Medical Board in 1818, that the disease is Bilious Cholera.—He (Dr. R.) says, "since it is sanctioned by established custom, I would not hesitate, as some have done, to give the name of Cholera to the epidemic, notwithstanding the absence, in many instances, of bile. The descriptions of authors, likewise Celsus, Sydenham, and Cullen, seem *perfectly applicable* to the disease under consideration." Now as these authors have described no other disease by the name of Cholera than that which is commonly denominated Bilious Cholera, it is plain that if their descriptions are perfectly applicable to the Epidemic Cholera of India, that it is Bilious Cholera and not a new disease. Every writer, except Mr. Whyte, who has described the Epidemic Cholera of India, has enumerated the symptoms characteristic of Bilious Cholera. It is no wonder, then, that there has been the "twelfth irruption of the disease," and it is more than probable that there will be annual irruptions so long as there are any inhabitants in India. The only person who has described a disease prevalent in India which, apparently, is the same disease as that which was epidemic in this country, and was named Asiatic, Malignant, or Epidemic Cholera, is Mr. Whyte. The disease was prevalent in a division of the army, but to what extent or at what period is not named by Dr. Good, from whose study of medicine the following description is extracted.

"The disease," says Mr. Whyte, "commonly begins with a watery purg-

ing, unattended with griping or any pain. At an interval of generally from half-an-hour to five or six hours, and sometimes without any interval, the patient vomits a white fluid unaccompanied in any instance with bile, of which there is abundance of evidence in every quarter. The spasms in the division of the army, from which this description is taken, made their attack at no determined period of the disease, but in general not for many hours after the commencement of the vomiting and purging. There was soon great debility and sinking of the pulse—the extremities became cold—the eyes sunk in their sockets—the vessels of the tunica adnata were injected with red blood, over which, if the disease advanced, a film was formed—the features expressed the greatest anguish, and the eyes were either wholly or half closed. The patient invariably complained of great heat of the stomach, and called incessantly for cold drink, although warned of the danger attending its use. The tenesmus now became violent, while nothing was discharged but the fluid just noticed, and a substance like the coagulated white of an egg. The uneasiness and jactitation was so great, that it was with the utmost difficulty an opportunity could be got of feeling the pulse, which by this time was not always perceptible, although it was generally so until the spasms came on. These were always of the rigid kind, attacking first the toes and legs, and then extending to the thighs, chest, and arms. When they reached the chest the breathing became so difficult and the sense of suffocation so extreme, that the diaphragm most probably associated in the spasmotic action." The symptoms here described strictly correspond with those of the intense form of the disease that was prevalent in this country, and was named Asiatic, Malignant, or Epidemic Cholera. The time that elapsed between the commencement of the purging and vomiting appears to have been much shorter in the disease described by Mr. Whyte than in that which occurred in this country; and it may be inferred, from the expression used by Mr. Whyte, "commonly begins with a watery purging," that the disease which occurred in India sometimes begins with some other symptom. Now the disease which was prevalent in this country *always* begins with purging, and the vomiting does not, in general, come on until two or three days, and in some instances not until a week or fortnight has elapsed. The diarrhoea which existed for a few days previous to the vomiting was not, in many instances, ascertained unless the patient was particularly questioned with respect to it; the disease was, in consequence, supposed, in many instances, to be very quickly fatal, the illness being dated from the commencement of the vomiting: but so invariably did the purging exist for some time previous to the vomiting, that it is by many writers named the preliminary diarrhoea or premonitory symptom.

It is impossible to ascertain the description of some of the diseases which have, in Europe, been considered Asiatic, Malignant, or Epidemic Cholera. Dr. Barry states, that "on going to Russia after reading the Indian reports, his impression was, the essential characteristics were ungovernable discharges *up and down*, and a state of collapse which destroyed the patient by absolute exhaustion. This he

found not only was not the ease, but that on the contrary the *want of discharges* was a *general occurrence.*" What the nature of the cases were in which there was a want of discharges, it is impossible to ascertain, as Dr. B. has not described them; but the cases which he has described certainly do not *exactly* correspond with the singular statement just quoted. He (Dr. B.) says, "they" Drs. Barry and Russel, "next visited three of the Emperor's Guards, whom they found eompletely prostrate, without other signs of life than the working of the spasms.— Their countenances were extremely shrunk; a blue halo had gathered round their eyes; the lips were blue and livid; the fingers discoloured, and contracted to nearly a third of their usual size; the dia-phragm was drawn up, apparently unable to hold the breath; and the voice was so low that every gasp seemed likely to be the last. The *dejections had been profuse*, as if the whole contents of the bowels had been thrown out at once, with the foree and velocity of a syringe: then followed pure serum, as if the blood had infiltrated into the intestines all that it eontained. On the belly of one of the men they found ridges of skin folded over like *wax*; they would not go down, the belly had been rendered so small. They afterwards saw several eases of the same class, but not so strongly marked." It is evident that there was no "want of discharges" in these eases, for they "had been profuse;" and it is plain, from the description of the disease, that it was Bilious Cholera, and not the disease which was prevalent in this country, and was named Asiatic, Malignant, or Epidemic Cholera. All the symptoms characteristic of the intense form of Bilious Cholera are described by Dr. B. as having been present in these eases. He (Dr. B.) has not indeed stated that the disease is attended with violent griping pain in the bowels; but there can be no doubt, from the "ridges of skin folded over like wax," that this symptom also existed.

If it did not exist, it is much more likely that Sydenham, if he had ever seen the disease which was prevalent at St. Petersburg, would have noticed it, than that he would have remarked "the blue colour of the hands and lips, and the extreme coldness of the tongue." It might naturally be expected that when the skin is as "cold as marble," and "there appeared as little pulse in the arm as there was in a wooden table," the tongue would not be exactly warm, and the hands and lips of the usual complexion. Dr. Berry very strangely observes, after de-scribing the disease as having been attended with every symptom of the intense form of Bilious Cholera, that "it possessed very little in common with the Bilious or Autumnal Cholera of this country, and that in his opinion—and he had seen hundreds of cases in Petersburg where the afflicted died after from six to twenty-four hours illness—this disorder bore more analogy to the worst forms of the Tertian Ague, than to that known as the English or Common Cholera." He, Dr. B., has also very inconsistently stated that "they," Drs. B. and Russel, "then saw a little drummer boy *who had already passed the cold stage of the disease.* His voice had sunk to a whisper, and altogether his appearances were such that Dr. Russel immediately recognised the disease;" and that "in its second or hot stage, indeed, the difference was not per-

ceptible between it and the regular Typhus Fever of this country." And again, "he had gone to the hospital at Sunderland, and saw three cases, but they had all passed the cold stage, when he could not speak positively as to the character of the malady: it might be Typhus." How, then, did Dr. Russel immediately recognise the disease to be Cholera in the drummer boy, who had already passed the cold stage of the disease? Might it not be Typhus? It appears that Dr. Barry, after some delay and difficulty at Sunderland, at last identified a case "about which," he says, "he was convinced he could not be mistaken. It was that of a young man who had gone about apparently well in the morning; but at noon he found him with his hands blue, tongue cold, *whining like a dog dying of asthma*, with his head hanging over the bed trying to vomit. He was a corpse at nine the same night." It is this case, it is presumed, only a little differently described, which Dr. Barry related to the Westminster Medical Society, to convince them of the identity of the disease that was prevalent in this country, and that which had been prevalent in St. Petersburg. "But the best way," says Dr. B., "of enabling the Society to form an estimate respecting the identity would be to mention a case. In Sunderland he had seen a fine young man, who proceeding to his work at eight in the morning was suddenly seized with the disease, though previously in excellent health, and when seen by him, Dr. B., at half-past eight, he was *all over as blue as the iris of his eye*, his head was hanging back over the bed, and the diaphragm seemed to labour against some intolerable oppression—at nine he was a victim to the Plague." He, Dr. B., related also another case, "that of a plump girl of sixteen—when he saw her in bed she looked blue, or of that hue produced by the nitrate of silver; or as if a black veil were drawn over the body. The face, which had been full, was shrunk to a mummy, and the lips, uncommonly thin, were separated, giving the appearance of an agonizing grin, precisely as if the hand of death were within her, tearing out the vital organs. There was no vomiting—she died about two hours after. Was this," exclaims the Doctor, "like English Cholera! He had suffered English Cholera often, and he well knew the bucketfulls that were discharged from one." These cases, and the description of them, are unparalleled in the annals of medicine; as no similar cases are described as having occurred in any other country, it is impossible to conceive how they were to enable the Society to form an estimate respecting the identity. It cannot be too deeply regretted that the members of the profession should have implicitly adopted the opinion of Dr. Barry with respect to the identity of the disease, who acknowledged his inability to distinguish it from Typhus Fever; or of Dr. Dann, who stated that he could not decide upon the nature of a case which occurred at Newcastle, but that had it occurred at Sunderland he would have considered it a decided case of Asiatic Cholera.

It is admitted by Mr. Kennedy, that the disease which was prevalent in this country and the Epidemic Cholera of India are not exactly the same disease. "The symptoms" he says, "of Cholera are *somewhat modified* in this country. They are com-

monly much slower in their progress to death or recovery in England than in India. In England, the disease is commonly attended with premonitory symptoms of many hours, or perhaps of some days duration, previous to the commencement of the severe attack ; and even when the severe symptoms have set in, it is but seldom they advance with such rapidity as was their usual course in India. In this outline are enumerated the more prominent modifications which the symptoms have presented in England ; but it must not be forgotten many cases occur which preserve throughout the whole of the acute period an exact resemblance to the Cholera in India, and without the slightest modification of any of the phenomena." As the only modification diseases admit of is in their degree of severity , it is clear, therefore, that if these diseases in general were so different in many respects, they could not be identically one and the same disease.— There were no cases of the disease which was prevalent in this country at the end of 1831 and the beginning of 1832, which had an exact resemblance to the Cholera in India. The latter disease is described by every writer, except Mr Whyte, as being attended with violent pain in the bowels ; but the disease which was prevalent in this country, and was named Asiatic, Malignant, or Epidemic Cholera, was unaccompanied with griping pain, of which there is abundance of evidence.

It is also stated by Mr. Kennedy, "that the above description of the symptoms will apply to the most ordinary course of Cholera ; but a deviation from this course is not unfrequent, consisting either in the absence of some one or more of these symptoms, or of a variable degree in their intensity. These irregularities in the phenomena have been the cause of much apparently contradictory testimony and strong feeling amongst medical men, which might have been avoided by an appeal to general experience, for in no disease do we find *all* the symptoms known to have attended it present in every case, or of uniform intensity." No person acquainted with diseases would expect to find all the symptoms known to have attended them present in every case, or of uniform intensity, but they certainly would expect to find all the characteristic symptoms present in every case. Almost every disease is attended with some symptoms which are also common to other diseases, but they each have some peculiar or characteristic symptoms by which they are distinguished, and which are present in every case. If medical men had, instead of implicitly and credulously adopting the opinion of those persons who identified the disease which was prevalent in this country as the same as that which was epidemic in India and at St. Petersburg, attentively investigated the evidence on which their opinion was founded, the contradictory testimony and strong feeling amongst medical men would probably have been prevented, as the disease which had so frequently been epidemic in India, and that which had been prevalent in St. Petersburg, and was described by Dr. Barry, is attended with violent griping pain in the bowels, and the disease which was epidemic in this country, is in every case unaccompanied with this symptom.

According to the Official Report Russian on Epidemic Cholera, the

first well-ascertained case of the disease that occurred in Europe is that described by M. Sokolov, and occurred at Orenburg, the capital of a province of Russia of that name, on the 26th August, 1829. M. Sokolov has minutely described two cases ; and they are extremely interesting and important, and not only clearly prove that distinct diseases have, in Russia, been identified as one and the same disease, but shew the necessity of distinguishing these diseases from each other, and the fatal consequences that ensue from improper remedies being administered and applied for their cure. The disease is described thus :—“The first breaking out of the disease at Orenburg,” says M. Sokolov, “was in all probability a private of the name of Andrew Ivanor, of the third battalion of the line. He was seized, on the 26th August, 1829, with frequent bilious vomiting, diarrhoea, *intolerable pain in the belly*, thirst, sunken features, blue lips, yellow sliminess of the tongue, coldness and painful cramps in the extremities, almost imperceptible pulse, extraordinary sudden sinking of the strength, and excessive anxiety. The disease was considered to be inflammation of the bowels, and accordingly a pound of blood was withdrawn ; leeches were applied to the belly, and demulcents and calomel were administered internally. Afterwards, the warm bath was resorted to, and warm aromatic poultices were applied to the abdomen. But notwithstanding this prompt assistance, he died at nine the same evening, in a state of insensibility, and covered with cold sweat.” No other case, it is said, occurred at Orenburg until the 8th September, “when about two in the morning,” says M. Sokolov, “a joiner of the name of Ivan Andrian was seized with the disorder. The malady began with a dreadful diarrhoea, which returned every minute. Although the weather was wet and cold, he imprudently went to satisfy the calls of nature into the open air, barefooted and undressed. About five o’clock he was without feeling, afflicted with cramps, and in a state of excessive prostration. At six I found him again sensible, but with sunken eyes, coldness of the hands and feet, and general clammy perspiration. He tossed about, and complained of tremblings of his hands and feet, a sense of oppression under the sternum, and unquenchable thirst. The vomiting, which, according to his own account, did not occur until some time after the purging, was at this time less frequent ; but the evacuations from the intestines continued, and were discharged involuntarily. The exhausted, powerless condition of the man, with the imperceptible pulse, imperceptible pulsation of the heart, the stiffness of the limbs, the coldness of the tongue, belly, and praecordia, left me no hope of his recovery. The administration of opium, with the oil of peppermint and ether, checked the vomiting only for a short time. Anodyne clysters had no better effect on the diarrhoea ; and warm spirituous drinks, and even the hot air bath, were resorted to without success, to restore the temperature and bring back the pulse. An unsuccessful attempt was made to draw blood from the arm ; and, soon afterwards, the man expired. After this, the disease spread rapidly, and became prevalent.”

These cases are considered one and the same disease, and are described by M. Sokolov by the appellation of Epidemic Cholera. They, however, are distinct diseases—distinct in their nature, cause, and symptoms, and require a very different mode of cure. The former case is the irritation of the inner membrane of the bowels that arises from the increased secretion of bile, which is produced by the intense heat of the atmosphere; and is the intense form of the disease commonly named Bilious Cholera. It is always attended with violent pain in the bowels, and the symptoms described as having been present in this case. The remedies requisite to its cure are laudanum and brandy, and are the reverse of those that were administered in this case. The warm bath, warm poultices, and calomel, which were resorted to, have a direct tendency to increase the severity of the disease, and render it destructive to life; and the practice of bleeding those who are afflicted with a disease, the danger of which arises from excessive depletion from the bowels, can have no other effect than that of accelerating its fatal termination.

The latter case is a distinct disease from the former, and is the intense form of Muco-Enteritis, or inflammation of the inner membrane of the bowels; and is the same disease as that which was prevalent in this country, and was named Asiatic, Malignant, or Epidemic Cholera. It occurs in cold and wet weather, and is attended with the symptoms described as having been present in this case; and is *never* attended with violent pain in the bowels. The remedies that are requisite to the cure of this disease are small doses of calomel, rhubarb, castor oil, the effervescent medicine, and demulcents, such as warm milk; and are directly the reverse of those that were administered in this case. Opium, anodyne cathartics,  $\text{\AA}$ ether, and spirituous drinks, increase the severity of the disease, and cause it to be destructive to life. Bleeding is also a dangerous remedy for the cure of this kind of inflammation, and never should be resorted to in any form of the disease. In the intense form, it will inevitably cause the disease to be almost instantly fatal. These cases might have terminated fatally if an opposite treatment and the necessary remedies, had been adopted; but in all probability they would not. There was not, from the treatment that was resorted to, a possibility of their recovery.

It is from the circumstance of those distinct diseases—the one of which occurs in summer and in very warm weather, and the other in winter and in cold and wet weather—having been identified as one and the same disease, and described by the same appellation, that the erroneous and pernicious opinion originated, namely, that the Indian Cholera “contemptuously braved the opposing power of every atmospheric condition, and that the burning heat of a Bengal or Molucca sun influenced its violence not more than the cold of a Moscow winter.”

The mild form of Muco-Enteritis, or inflammation of the inner membrane of the bowels, has ever been of usual and frequent occurrence in this and in other countries in cold and wet weather, and has

in this country generally been named Diarrhœa. The severe and intense forms of the disease, which have not been of very frequent occurrence, have either been included in the same appellation, or have had no distinct name attached to them. It is sufficiently obvious that there was nothing new or unusual in the mild, and in many cases of the severe, forms of the disease that was prevalent in this country, and was named Asiatic, Malignant, or Indian Cholera, from the fact that these cases were considered and reported as common Diarrhœa. It was only with respect to the intense form of the disease, or when cramp supervened, that so much diversity of medical opinion existed, and which induced many to assert that the disease was identical with the Cholera in India. They, however, might just as correctly have stated that it was the same as the Cholera in England, as Cholera is the same disease, arises from the same cause, and is attended with the same symptoms, in every country.

As almost all epidemic and very fatal diseases were in former times included in the unintelligible appellation of Pestilence or Epidemic, and were not particularly described, it is impossible to ascertain whether Muco-Enteritis has ever, previously to 1831, been as extensive and severe. But it is evident, from the description of the disease that was prevalent in the Milbank Penitentiary, in 1821 and 1822, that the disease has previously existed in every degree of severity in this country, and has been very fatal in its effects. "We found," says Dr. Latham, "the prevailing disease to be Diarrhœa or Dysentery; and in all who suffered there were various degrees of nervous affections, as tremors, cramps or spasms, and various degrees of mental despondency. Between the 14th of February and the 1st of March, no less than forty-eight were afflicted, chiefly with Diarrhœa and Dysentery. The Diarrhœa and Dysentery were of a peculiar kind, and were found spreading extensively, but in different degrees. The patients were seized with intolerable cramps at the pit of the stomach. They retched and vomited, and a thin turbid serum ran from their bowels, followed by severe tenesmus; the pulse became feeble and frequent; they were pale and chilly, and a sudden anguish pervaded their whole frame: moreover, there was every kind and degree of dysentery; some purged pure blood in large quantities; others a fluid like water in which raw flesh had been washed—again, there were cases which differed very little from diarrhœa of common occurrence, except that they were quite untractable to common remedies. Lastly, there were cases which had no resemblance whatever either to Cholera, or dysentery, or diarrhœa, or to any disease that has obtained a name. In the evacuations there appeared nothing that had any sensible quality of faeces, bile, or blood, or (of what is understood by) mucous or slime. The evacuations were always of enormous quantity. The majority had some perpetual uneasiness in the abdomen, and there was a very general complaint of (what was called) sinking at the pit of the stomach. Two cases, which occurred soon after our first employment, made a striking impression on our minds. They had arrived by a slow and certain and uninterrupted progress at their fatal termination. The patients had no other symptom of

disease but a simple diarrhoea. They had no pain; no fever; their pulse was sixty, and no more: their purging was incessant and uncontrollable; but there was no morbid quality in their evacuations, except that they were watery. In process of time, cases became more and more numerous, consisting of simple diarrhoea alone. Many poor wretches thus afflicted lay in bed without fever; without pain; without excitement of the pulse, but with a turbid water continually running from their bowels. This was their only symptom, and this nothing could control. Their complaint, as long as they could complain, was of that dreadful sinking. But now their complaining had ceased. Being roused, they looked up for a moment, but made no lamentation, and then laid their heads down in despair."

Several hundreds of persons in the Penitentiary were afflicted with the disease, and a great number died. No reasonable doubt can be entertained that the disease with which the greatest number of those persons were afflicted, was identically the same disease as that which was so extensively prevalent in this country at a more recent period; and there can be no doubt that had those cases occurred at the latter period, they would have been considered and reported as Asiatic, Malignant, or Epidemic Cholera. The disease that occurred in the Penitentiary produced as much diversity of medical opinion, and occasioned as much perplexity to the medical attendants, as that of more recent occurrence. Many regarded it as scurvy in the bowels; but the editor of the Edinburgh Medical Journal very properly considered it inflammation of the mucous or inner membrane of the bowels; and he very justly observes, that "a disease, of which the principal characters were numerous fluid evacuations in the course of a daily evolution, without much apparent constitutional disorder, could not reasonably be referred to any other head." It was only from the circumstance of the disease in the Penitentiary becoming so very prevalent and extensively fatal, that any particular attention was directed to it; or that it was considered to be any other disease than diarrhoea of usual occurrence; and it was the same circumstance that caused the disease of more recent occurrence to excite such extraordinary attention. Had it not been for the circumstances just mentioned, it, in all probability, would have remained undescribed, and would have been scarcely noticed.

The similarity of many of the symptoms of Cholera and of Muco-Enteritis, is only what might naturally be expected from the nature of these diseases, and may be familiarly explained by referring to the affections of the mucous or inner membrane of the nose. The application of any unusual irritant to that membrane produces violent irritation and an increased secretion. The same effects arise from the increased secretion of bile, which irritate the inner membrane of the bowels, and produces violent pain and excessive dejections. In inflammation of the inner membrane of the nose, a considerable secretion is produced; a similar effect arises from inflammation of the inner membrane of the bowels. The congestion or intense form that supervenes in each disease, is the effect of the excessive dejections.

## CHOLERA—IRRITATION OF THE INNER MEMBRANE OF THE BOWELS.

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This disease occurs in temperate climates only during the hottest period of the year; and is, in this country, always prevalent at the end of summer and beginning of autumn. In warm climates, particularly in the Eastern Hemisphere, its occurrence, it is said, is very frequent in the year. Its severity and extensiveness are in proportion to the intenseness of the heat of the atmosphere. The disease is attended with the following symptoms, according to its degree of severity. The symptoms are—

IN ITS MILD FORM.

1. Griping or twisting pain in the bowels.
2. Frequent and copious purging.

IN ITS SEVERE FORM.

1. Violent griping pain in the bowels.
2. Very frequent and copious purging.
3. Sickness, severe and frequent vomiting, and sometimes cramp in the lower extremities.

IN ITS INTENSE FORM.

1. Violent griping pain in the bowels.
2. Very frequent and copious purging.
3. Sickness, and severe and frequent vomiting.
4. Cramp or spasm in the extremities, and sometimes of the whole body.
5. The skin is cold and clammy.
6. The breathing is hurried and oppressed.
7. The pulse is small, quick, and sometimes imperceptible.

There are, in the severe and intense forms of the disease, many other symptoms, such as sunken features, excessive thirst, livid colour of the lips, hands, and feet, and several others, which are unnecessary to be mentioned; as it is only by a strict attention to those which have been enumerated that the disease can be ascertained.

The mild form of the disease, after continuing for several hours, generally spontaneously subsides; but it sometimes, and especially if any improper remedies be administered, becomes the severe and dangerous forms of the disease. The disease often begins, in the severe form, with violent griping pain in the bowels, and purging, which are quickly succeeded by severe vomiting. Sometimes the purging and vomiting commence almost simultaneously; and sometimes the vomiting shortly precedes the purging. When the purging and vomiting are extremely severe, and proper remedies are not quickly and judiciously administered, congestion of the lungs, or state of collapse supervenes, which constitutes the intense and extremely dangerous form of the disease.

The disease is of very short continuance, and terminates either in death or convalescence in twenty-four hours.

In very young children, the disease can be ascertained only by the frequent and copious purging; or frequent purging and vomiting, the frequent drawing up of the legs towards the belly, and the tongue *not* being covered with a white fur. Children are not often afflicted with the intense form of the disease.

As young children are very subject, at any time of the year, to inflammation of the mucous or inner membrane of the bowels, which is attended with frequent and copious purging, and often with vomiting; and as the remedies that are requisite to the cure of Cholera would be attended with fatal consequences in this disease, it is extremely necessary that these diseases should be distinguished from each other. In inflammation of the mucous membrane of the bowels, the tongue is covered with a white fur, the legs are not drawn up towards the belly, and the disease, if not relieved by proper remedies, continues for several days, and sometimes for many weeks. In Cholera, the tongue is not covered with a white fur, the legs are frequently drawn up towards the belly, and the disease is of very short duration, and never occurs but in excessively warm weather.

Cholera is distinguished from the effects produced by the mineral poisons, by the sense of burning heat in the throat and stomach which they occasion, and which is felt previous to the commencement of the vomiting, and by the pain in the bowels being constant. From Mucico-Enteritis, or inflammation of the inner membrane of the bowels, by the absence in that disease of violent griping pain in the bowels, by the tongue being covered with a white fur, and by it occurring in cold and damp weather.

Cholera arises entirely from the increased secretion of bile, which is produced by the intense heat of the atmosphere. The violent pain, purging, and vomiting, arise from the irritation of the inner membrane of the bowels, which the bile excites. The congestion or collapse that supervenes, is the effect of the excessive dejections, and arises from the deficiency of blood to the brain, which is occasioned by them.

#### TREATMENT.

In the mild form of the disease, twenty or thirty drops\* of laudanum should be taken in a little mint water, or water, and repeated

\* The doses of laudanum recommended above are intended for those persons whose age exceeds twenty years, if under that age, the doses must be regulated as follows:—

From 15 to 20—Twenty or thirty drops for the first dose, and fifteen or twenty every succeeding dose.

10 to 15—Ten or fifteen drops for the first dose, and eight or ten every succeeding dose.

5 to 10—Eight or ten drops for the first dose, and six or eight every succeeding dose.

2 to 5—Three or five drops for the first dose, and two or three every succeeding dose.

1 to 2—Two or four drops for the first dose, and one or two every succeeding dose.

Under 1 —One or two drops for the first dose, and one every succeeding dose.

every three or four hours, until the purging abates. A little brandy may also be taken, either by itself, or with cold water. All warm liquids should be abstained from, and bodily exertion, and exposure to heat, as much as possible avoided.

In the severe and intense forms of the disease, thirty or forty drops of laudanum should be taken as soon as possible, in a table-spoonful or two of mint water, or water ; and if this be rejected by vomiting within a quarter of an hour after it has been taken, the same quantity of laudanum must be instantly repeated, in a little mint water, or water, as before. A table-spoonful or two of brandy should also be taken, either by itself, or with an equal quantity of cold water, and repeated every hour, or oftener, until the vomiting ceases. It will be necessary to take twenty or thirty drops of laudanum in a little mint water, or water, every two or three hours, or oftener, if the purging continues severe, until the purging entirely abates. In warm climates, and especially in the Eastern Hemisphere, much larger doses of laudanum than those which are here recommended, are administered ; and in those cases in which the griping pain, vomiting, and purging are extremely severe, they may be requisite. From fifty to a hundred drops of laudanum have, in India, been taken and repeated occasionally, until the violence of the symptoms was subdued. But probably the most judicious practice, in those climates, is to take forty or fifty drops of laudanum for the first dose, and thirty or forty every succeeding dose, and after every loose evacuation. The purging must be subdued, or death will ensue. Opium in the form of pill is sometimes advantageously taken, especially when laudanum is rejected by vomiting. Two or three grains of opium should be taken for the first dose, and two grains may be repeated every two or three hours, or oftener if the violence of the purging require it ; and until the purging entirely abates. A clyster, composed of two tea-spoonsful of laudanum and a half-pint of cold water, is sometimes administered ; and in those cases in which the vomiting is extremely severe, and the laudanum is rejected, it often affords great and immediate relief. It may be repeated every two or three hours, until the purging abates. A little laudanum should be rubbed occasionally over the stomach and bowels, in those cases in which the pain and vomiting continues to be severe. When the cramp or spasm in the extremities is very severe, a little laudanum, or equal parts of laudanum and brandy, may be rubbed occasionally upon the arms and calves of the legs. The effervescing medicine affords great relief to the excessive thirst and sickness, and may be taken every quarter of an hour, or oftener, if necessary. It is made in the following manner :—half a tea-spoonful of the carbonate of soda is dissolved in two table-spoonsful of cold water ; a table-spoonful of lemon juice is then to be added to it, immediate effervescence takes place, and it should be drunk immediately and during the state of effervescence. If lemon juice cannot be obtained, the third part of a tea-spoonful of tartaric acid, dissolved in a table-spoonful or two of cold water, may be substituted for it. The only beverage that should be taken is cold toast and water, soda water, oatmeal and water, or very weak brandy and cold

water. Warm liquids of every kind must be carefully abstained from ; and no hot or warm applications of any description should be applied to any part of the body. The bed room and patient must be kept as cool as possible.

When laudanum or opium cannot be obtained, a small quantity of brandy should be taken, and frequently repeated. If brandy cannot be procured, a tea-spoonful of powdered ginger may be taken in half a cupful of cold water, and repeated, if necessary.

But laudanum or opium is the only remedy that can be relied on for the cure of this disease, and is, as has been justly observed by the illustrious Sydenham, "the sacred anchor in this disease." It and brandy are so indispensably requisite for the relief and cure of this disease, that no vessel should proceed to sea in summer, or to any warm climate at any season of the year, without them, and plain directions for their use.

After the disease has subsided, the best diet that can then be taken is boiled rice, barley, or sago and cold milk. Chicken broth may also be taken ; but, if taken, it should be nearly cold. If tea or coffee be taken, they should be nearly cold. All warm liquids should be abstained from for several hours after the disease has abated.

The treatment here described, is that which experience (an invaluable part of the science of medicine) has proved to be the only efficacious mode of cure for this disease. No reliance can be placed in any remedy but laudanum or opium ; and it has been very justly observed, that it given early, and in sufficient quantity, is as effectual in this disease, as any other specific in any other disease to which we are subject. Brandy is also extremely useful in allaying the sickness, vomiting, and excessive irritation of the stomach and bowels in this disease. It, therefore, in the severe and intense forms of the disease, should always be administered.

It is recommended by some medical writers, and by the distinguished Sydenham, to administer, at the commencement of the disease, diluents, such as warm chicken-broth ; but the practice evidently is injudicious and dangerous. Warm diluents increase the severity of the disease ; and it is of the utmost importance to arrest the secretion of bile as quickly as possible. Laudanum, therefore, cannot be administered too early. If the disease be treated promptly and judiciously with laudanum, the congestion of the lungs, or state of collapse, will not supervene, and the disease will not be attended with danger. The remedies, such as calomel, the warm bath, and bleeding, which are recommended by some medical writers for the cure of this disease, and have been adopted by some medical practitioners in India, are extremely improper and dangerous. The calomel and warm bath increase the secretion of bile, and consequently the severity of the disease. These remedies, therefore, and the abstraction of blood from those who are afflicted with a disease which is dangerous in proportion to the extent of the depletion which it occasions from the bowels, can have no other tendency than that of assisting the disease to destroy the life of the patient.

## MUCO-ENTERITIS\*—INFLAMMATION OF THE INNER MEMBRANE OF THE BOWELS.

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This disease occurs in this and other countries only during cold and wet weather, and is sometimes extensively epidemic. It is attended with the following symptoms, according to its degree of severity. The symptoms are—

### IN ITS MILD FORM.

1. Frequent and copious purging.
2. The tongue is slightly covered with a white fur.

### IN ITS SEVERE FORM.

1. Very frequent and copious purging.
2. The tongue is covered with a white fur.
3. Sickness and frequent vomiting, and sometimes cramp in the lower extremities.

### IN ITS INTENSE FORM.

1. Very frequent and copious purging, which is often passed involuntarily.
2. The tongue is covered with a white fur.
3. Sickness, severe and frequent vomiting.
4. Cramp or spasm in the extremities, and sometimes of nearly the whole body.
5. The skin is cold and clammy.
6. The breathing is hurried and oppressed.
7. The pulse is small, quick, and sometimes imperceptible.

In the severe and intense forms of the disease there are many other symptoms, such as great anxiety, sunken features, excessive thirst, livid colour of the lips, hands, and feet, and several others which are unnecessary to be mentioned, as it is only by a strict attention to those that have been enumerated, that the disease can be ascertained.

The disease always begins with purging, which continues in general for two or three days, and sometimes for a week, or fortnight, without any other symptom being produced. If the disease increases, and if spirit or any stimulant, or any preparation of opium, be taken, it very rapidly increases ; vomiting ensues. If the purging and vomiting be severe, congestion of the lungs, or the state of collapse, supervenes ; and, unless the disease be treated mildly and judiciously, death quickly ensues.

So great is the similarity of the symptoms and appearances of this disease and of Cholera, when congestion supervenes in each of those

\* This is not a new name. It is used by Dr. Armstrong, and is applied by him to the inflammation of the mucous or inner membrane of the bowels.

diseases, that they have, in a great number of instances, and at different periods in different countries, been identified as one and the same disease, and described by the same appellation. But, as the remedies that are indispensably requisite to the cure of the one, are extremely improper and dangerous in the other, it is of the greatest importance that they should be distinguished from each other.

This disease is easily distinguished from Cholera by the absence of griping, or violent pain in the bowels, and by its occurring in cold and wet weather.

This disease arises entirely from a cold and damp atmosphere. The purging and vomiting is the effect of the inflammation of the mucous or inner membrane of the bowels. The congestion of the lungs that supervenes, arises from the deficiency of blood to the brain, which is occasioned by the excessive dejections. Congestion of the brain, in some instances, also ensues ; and, in this case, the mind is impaired, there is a vacant expression, the patient complains of no pain, and is unconscious of his dangerous condition.

#### TREATMENT.

In the mild form of the disease, one grain of calomel,\* and four or five of powdered rhubarb should be taken, at bedtime, in a little jelly or treacle ; and a tea-spoonful of castor oil in the morning, in half a cupful of warm milk. A dose of the effervescing medicine† should be taken three or four times a day. The calomel and rhubarb should be taken every night, and the castor oil every morning, and the effervescing medicine continued until the purging entirely abates. The diet should consist of tea or coffee, boiled rice, barley, sago and warm milk, and light puddings. Chicken broth may also be taken ; but animal food must be abstained from. Spirit of every kind, wine, ale, and porter, and stimulants of every description, must be strictly avoided. The patient should be kept moderately warm, and avoid exposure to cold.

In the severe and intense forms of the disease, one grain of calomel to four or five grains of powdered rhubarb, should be taken immediately, in a little jelly or treacle. A dose of the effervescing medicine should also be taken directly, and repeated every half hour, or directly after each vomiting, and may be taken every ten minutes, or oftener, if necessary. A tea-spoonful of castor oil should be taken in half a cupful of warm milk, three or four hours after the calomel and rhubarb has been taken. One grain of calomel and four or five of rhubarb should be repeated every six or eight hours ; and a tea-spoonful of castor oil should be taken three or four hours after each dose of calomel and rhubarb, in warm milk, as before. These remedies, and the effervescing medicine, must be continued until the vomiting and purging entirely cease. A large clyster

\* To children, half a grain of calomel, and two grains of powdered rhubarb, should be given for a dose ; and half a tea-spoonful, or less, of castor oil. Half the quantity of the effervescing medicine should be given.

† It is made as directed in the treatment of Cholera.

of warm thin gruel, or warm water, should be administered two or three times a day ; and, in the intense form of the disease, it may be administered every three or four hours. The only beverage that should be taken, is warm milk, or equal parts of oatmeal gruel and warm milk ; sago and warm milk, or chicken broth, may also be taken. The patient must be kept warm and dry. The bed of the patient, in the intense form of the disease, must be strictly attended to, as the evacuations are frequently passed involuntarily.

The mild treatment is the only efficacious mode of cure for this disease ; and when the disease became so very prevalent and severe in this town (Newcastle upon Tyne) in 1831, the remedies which have been described were recommended, through the medium of the weekly press, by me for its cure, and were administered in nearly two hundred cases of the disease, a great many of which were of the severe and intense forms, which I attended, and of this number sixteen died. To some of those that died stimulants had been administered, and some of them had been bled previous to my attendance ; a few of them were advanced in years, and were too long in obtaining medical aid. None under thirty years of age whom I attended died, and only two under forty.

Several respectable medical practitioners of this town have, and in some instances recently, expressed to me their approbation of the mild treatment which I recommended, and their conviction of its decided efficacy. It is stated by Sir W. Creighton, "that among the miserable peasants in the neighbourhood of St. Petersburg, a considerable number of what appeared to be the very worst cases recovered without any medical assistance—a common practice among them was drinking warm milk." Many cases of the mild and severe forms of the disease that were attended by me, and to whom nothing was administered but the effervescing medicine and a warm milk diet, recovered. The disease, if treated mildly, will soon subside ; but, if stimulants or opium be administered, or bleeding be resorted to, it will inevitably be fatal.

It is impossible to reflect on the dreadful consequences that ensued from the adoption of such remedies as mustard, turpentine, bleeding, opium, the actual cautery, tobacco enemas, brandy, and other stimulants, without being impressed with feelings of the most painful description. The stimulants inevitably increased the inflammation of the mucous or inner membrane of the bowels, and rendered the disease, in every instance in which they were administered, destructive to life. They were given to excite the heart's action, and restore the heat of the surface of the body ; but they increased the cause on which these symptoms depended, and produced the opposite effect to that for which they were administered. Many cases of the intense form of the disease which I attended, and in which there was a cold and clammy skin, a feeble or imperceptible pulse, and all the symptoms peculiar to the state of congestion or collapse, continued in that state for one, two, and in some instances for three days, and during the whole of that time no pulse could be felt at the wrist ; and yet the inflammation subsided ; the purging and vomiting ceased ; the heart's

action, and heat of the surface of the body, returned ; and they recovered by the mild mode of treatment.

Opium was administered to arrest the diarrhoea or purging ; but it always increases this symptom, when it arises from inflammation of the mucous membrane of the bowels : it, therefore, is a very improper and dangerous remedy in this disease.

It is impossible to conceive why turpentine, which in large doses is a very nauseous and powerful purgative, (and in some instances half a pint was given at once,) was administered to those who were afflicted with this disease, and who were extremely sick, and almost purged to death. The stimulating enemata, or clysters, composed of turpentine and mustard, which, it appears, were in common use with some practitioners, were attended with the most destructive consequences, and are a lamentable proof of the infatuation that existed at that period.

As the infusion of tobacco generally produces, when administered by way of clyster, sickness, faintness, and great depression, and often severe vomiting and purging, it is obvious that it must be a very improper and dangerous remedy in a disease that is attended with sickness, faintness, extreme depression, and excessive vomiting and purging.

Bleeding was adopted to relieve the oppression of the lungs and heart ; but their diminished action, in this disease, is occasioned by the excessive dejections ; and the abstraction of blood from those who are afflicted with a disease that is attended with frequent and copious purging, and especially when this symptom is accompanied with a cold and clammy skin, and a feeble and almost imperceptible pulse, is as repugnant to reason as it is dangerous in practice ; and it is surprising that any medical practitioner would attempt to bleed those persons who are completely exhausted, and are sinking from the excessive depletion from the bowels.

And with respect to that cruel and worse than barbarous practice, the application of the actual cautery, or red-hot iron, to each side of the spine, and which was used by Dr. Laing in St. Petersburg for the cure of Bilious Cholera, and was strongly recommended by Dr. Barry, and used in one instance for the cure of the disease that was prevalent in this country, it is impossible to deprecate in sufficient terms of reprobation and abhorrence.

#### ERRATUM.

In p. 16, last line, for "Official Report of Russian," read "Official Report of Russia."